



April 2005

Bachelor of Arts in Biological Psychology Western Washington University

Introduction

Western Washington University (WWU) is seeking approval to establish a Bachelor of Arts (BA) in Biological Psychology. Biological Psychology, also known as neuroscience, is an interdisciplinary field that emerged from the convergence of scientific advances in biology and psychology. The proposed program is a response to these advances and would draw existing coursework and faculty in biology and psychology together in a new degree program. The program would begin in fall 2005.

Program Need

The program is consistent with two goals in WWU's strategic plan: 1) to strengthen interdisciplinary programs and 2) to address a rising public need for specialized preparation and technological sophistication so that undergraduates will successfully transition to the workplace or advanced study in graduate or professional programs. The proposed program would meet these goals by exposing students to the latest knowledge in the field through a combination of classroom study, lab work, and opportunities for internships in research laboratories and health care settings.

The biological psychology baccalaureate degree would prepare students for entry-level positions in diverse fields, such as biomedical research and the pharmacological science. In addition, graduates would be prepared for advanced study in a variety of scientific and social service fields, including neuroscience, neurobiology, pharmacology, psychology, and mental health counseling. With careful planning of elective coursework, graduates of the program could also be prepared to enter health care related graduate programs, including medical and dental schools, physical and occupational therapy, and veterinary medicine.

The proposal indicates that students who do not go on to graduate school would find employment in the health related sciences and biotechnology fields. Health services is the largest industry in the United States and, while many occupations within the industry are among the fastest growing, most require specialized professional training. The industry employs

workers at all levels of training and the proposed program may prove to be excellent preparation for many jobs in the health services industry.

The WWU proposal also points to the growing biotechnology industry in western Washington as an important employment opportunity for graduates. According to the Washington State Department of Community Trade and Economic Development, biotechnology is among seven industries that are the focus of the state's current economic development efforts. Projections for the biotechnology industry are not available, but providing workers with the preparation to fill positions within the industry would be an important aspect of any plan to grow the industry.

Faculty report significant student interest in the proposed program; in fact, in recent years, five students have already designed a course of study that mirrors the proposed curriculum as a self-directed major. In addition, the interdisciplinary courses in psychology and biology that would make up the core curriculum are popular among current biology and psychology majors, with many of the related core courses in biology and psychology consistently oversubscribed (enrollment caps are met or exceeded) at WWU.

The program would serve the community through various student activities and program events. Students in the program would have the opportunity to participate in internships in research laboratories and health care settings. Internships provide an excellent service to both the community and the students. In addition, the program would create learning opportunities for community members through events such as Western's Family Open House and Western's participation in the annual Brain Awareness Week.

Program Description

As the result of scientific advances, psychology and biology have merged to give rise to the new interdisciplinary field of biological psychology (or neuroscience). The Biological Psychology major would require 109-110 total credits, including 24 credits in math and chemistry, 65-66 required credits in biology and psychology, and 20 elective credits in from biology and psychology.

The curriculum would rely on courses currently offered by the two departments involved in this collaboration and would be delivered using existing faculty. The faculty would also take on an additional role in advising students who enroll in the proposed major. Students enrolled in the program would gain knowledge of science with an emphasis in the psychobiology of normal and abnormal behavior. Student learning outcomes would include effective critical thinking, problem solving, organization, collaboration, and oral and written communication.

Admission to the major would require successful completion of at least 75 credits with a 2.7 or higher grade point average. Prerequisites include general education liberal arts and sciences coursework, including specified mathematics, chemistry, biology, and psychology courses.

Similar programs are offered by the University of Washington and Washington State University. WWU considered these programs in developing its Biological Psychology program in order to design a unique course of study that would draw on the university's existing resources and strengths. The WWU degree would require a broad liberal arts and sciences foundation, drawing on a strong arts emphasis in psychology and science emphasis in biology. WWU would be the only regional university in the state to offer such a program.

The Biological Psychology program would utilize existing resources, including currently offered coursework and existing faculty, staff, and facilities. First-year enrollment is projected at 10 full-time equivalent (FTE) students, with 40 FTE at full enrollment by the fourth year. Growth beyond 40 students would require new FTE funding to support additional faculty and staff as well as new laboratory space.

Assessment

The program would follow the campus-wide assessment process which includes an ongoing assessment of the program through a variety of methods – i.e., feedback from students and alumni, as well as faculty assessment of the program, student learning, and teaching effectiveness – in order to respond to student and industry needs and improve the program over time. Student performance in the program would be assessed against a set of well-defined learning outcomes. Assessment techniques would include classroom assessment in the form of examinations, written work, and oral presentations. In addition, students would engage with faculty in research projects that would draw together knowledge from across the curriculum. Finally, students would participate in the Student Learning Outcome Gains surveys for select courses in the Biological Psychology program. The survey would be used to assess the effectiveness of a course's content and assessment strategies in meeting the needs of students.

Graduates would continue to provide feedback in the context of an exit interview and a follow-up interview five years after graduation. Interviews would help administrators and faculty assess the effectiveness of the program in preparing students for the demands of their postgraduate endeavors, the effectiveness of the program in meeting goals, and the extent to which the undergraduate degree had a significant impact on students' careers, life choices, and contributions to society.

Diversity

The proposed program would participate in campus-wide initiatives designed to recruit and retain a diverse student body. Students of color comprised 3.7 percent of the student body in 1980 and 14.2 percent in 2002. Under-represented students enrolled at WWU would be made aware of the Biological Psychology program and research fellowships through guest lectures by the biological psychology faculty in first-year survey biology and psychology classes. WWU has already enrolled two under-represented students in this program as student-faculty designed majors.

Review Participants

The institution submitted the program to two external experts for review.

The program was reviewed by a senior professor in Biological Psychology at the University of British Columbia, who endorsed the program and offered suggestions dealing with the recruitment of students and curricular issues, including adding one course and renaming another to better reflect current scholarship in the field. The reviewer praised the program for the quality of the faculty involved in the development and delivery of the coursework, as well as the interdisciplinary nature of the program.

The program was also reviewed by the chair of the physiology/neuroscience program at the Medical University of South Carolina, who also endorsed the program while suggesting the program reach out to the biology faculty for a greater level of involvement. This reviewer also recommended addition of a research component to the degree requirements. The reviewer applauded the timely nature of the proposal in light of a growing demand for students with the skills who are able to meet industry needs in Washington State and the development of such a program with a strong liberal arts and sciences emphasis.

WWU has responded positively to the reviewers' comments with clarifications of the requirements and is implementing many of the recommended changes.

Program Budget

The program was developed using existing coursework and faculty. With an estimated 40 FTE students at full enrollment, the program would not require additional administrative or faculty costs. However, if the program were to grow beyond the planned capacity of 40 FTE students, additional facilities, faculty, and administrative support would be required. The program would rely on 16 faculty (9 in Biology and 7 in Psychology) to deliver the required core coursework. Two faculty would provide advising support to students in the program. The majority of the faculty hold full-time appointments (14 out of 16), with 11 at the rank of associate professor or higher. The departments estimate that faculty and administrative support would represent 1.4 FTE and .2 FTE, respectively, for an estimated cost of \$2,458 per FTE.

Staff Analysis

The willingness of academic units to work together to develop a program that responds to student, employer, and graduate program needs in recognition of changes in the scientific fields and the needs of the workforce is commendable. The proposed program represents an effective collaboration among multiple departments at WWU to create an interdisciplinary degree program using existing resources.

The external reviews attest to the timely nature of this program in light of changes in the field and the needs of a number of growing employers in the region. The proposal demonstrates a need for the type of training students in the proposed program would receive. Graduates would be prepared for work in growing and well-paying occupations, or advanced study in a variety of graduate and professional fields for which this degree would be excellent preparation.

The Biological Psychology program should attract sufficient numbers of well-qualified students to meet enrollment targets. The proposed program is consistent with the role and mission of the institution and is a timely response to regional and statewide needs. The proposal reflects changes in the field that require a new level of collaboration between previously independent streams of research and teaching.

Recommendation

Based on careful review of the program proposal and supplemental sources, HECB staff recommend approval of the Bachelor of Arts in Biological Psychology at Western Washington University.

RESOLUTION NO. 05-05

WHEREAS, Western Washington University proposes to establish a Bachelor of Arts (BA) in Biological Psychology; and

WHEREAS, Few options are available within the state for students who wish to study Biological Psychology at the baccalaureate level; and

WHEREAS, The program represents an effective collaboration among departments, building on existing expertise, and course offerings to respond to a clearly stated student, employer, and community need; and

WHEREAS, The external reviews attest to the quality of the program and faculty and to the demand for this program; and

WHEREAS, The assessment and diversity initiatives are appropriate for the program; and

WHEREAS, The program would offer students the opportunity to engage in an emerging interdisciplinary field of study;

THEREFORE, BE IT RESOLVED, That the Higher Education Coordinating Board approves the Western Washington University proposal to establish a Bachelor of Arts (BA) in Biological Psychology.

Adopted:

April 5, 2005

Attest:

Bob Craves, Chair

Gene Colin, Secretary